Government Issue

FIRST MILITARY WORLD GAMES

inside

NOVEMBER / DECEMBER 1995

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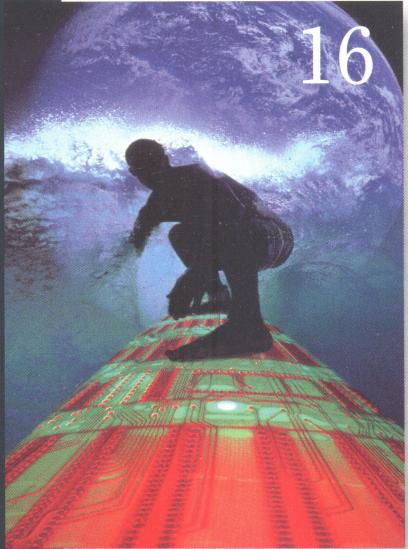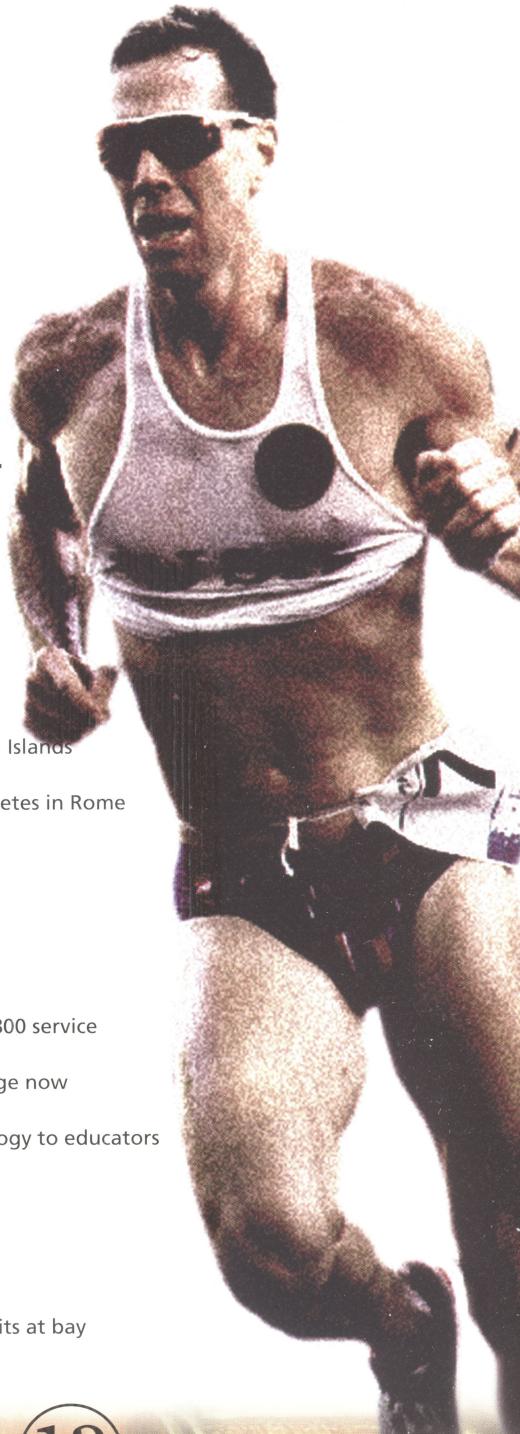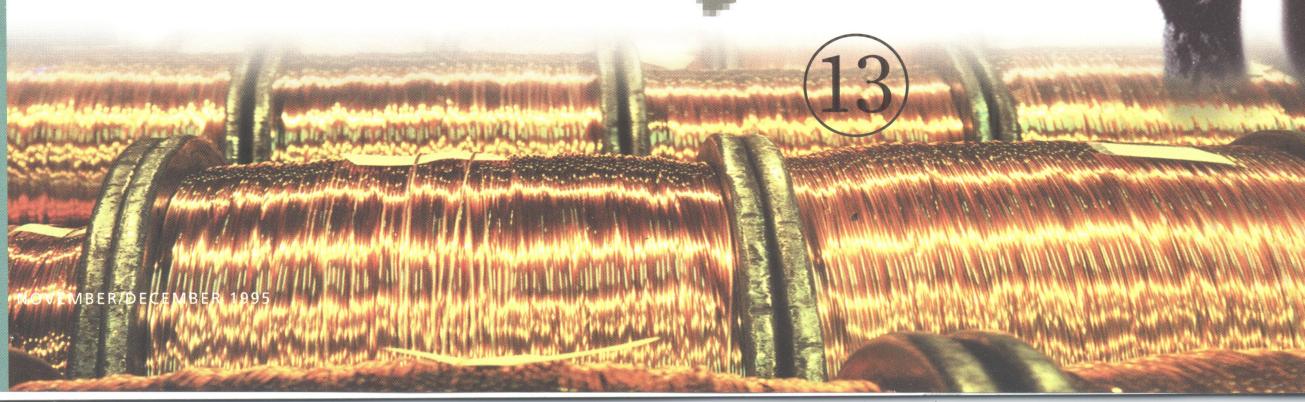
ON THE COVER
PHOTO BY GIORGIO MAIOZZI

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Hurricane Marilyn

Corps of Engineers Uses FTS2000 To Help in Virgin Islands Restoration

AFTER HURRICANE MARILYN hit the Virgin Islands Sept. 16, the trial by hurricane became a trial by fire for the U.S. Army Corps of Engineers' new Remote Site Network Connectivity (RSNC) service.

Ken Calabrese, chief of the Corps Automation Program, had been preparing for a trial of the AT&T FTS2000 RSNC service in Vicksburg, Miss. RSNC provides digital voice, data, packet switching and fax service through portable satellite terminals.

But a few hours after Marilyn struck, Calabrese received orders to ship the equipment from Vicksburg to the Corps' San Juan, Puerto Rico outpost and on to St. Thomas for emergency restoration efforts in the U.S. Virgin Islands.

Two days later, Calabrese was on St. Thomas with a team of four Corps personnel and Tom Burgee of AT&T Tridom, who installed the system within an hour at a local hotel. Using borrowed space on the Telstar 401 satellite donated by the American Farm Bureau and power from an emergency generator, the service immediately linked the emergency operations base with Corps locations in Puerto Rico and the U.S. mainland.

The team arrived on St. Thomas to find widespread destruction from Marilyn, which had arrived even as the area struggled to recover from the effects of Hurricane Luis. The islands were without power and sufficient fresh water. An estimated 10,000 people were homeless. Corps of Engineers personnel already had begun their missions of providing emergency water, ice and electric power, installing temporary roofing and removing debris from the island and its harbor.

"Communication was our biggest problem," said Calabrese. "The local phone system was down, and there was no way to communicate across the island. It was so important we had our communications network up and running. It allowed us to call our bases in San Juan, Jacksonville, Washington and anyplace else offshore to arrange for supplies and logistics."

Calabrese said although a few bugs had to be worked out, the RSNC service was performing well during the emergency. "We asked AT&T to do in a couple of days what normally would be about 30 days' work — shipping, connecting and securing access for the service," he said. "A lot of people worked long hours during that weekend to get us up and running by Monday evening."

AT&T also helped civilian recovery efforts by providing free message relay service for local residents. By Sept. 21, the Red Cross and a local radio station had collected more than 10,000 messages AT&T forwarded to friends and family of the island's inhabitants around the globe.

AT&T restored commercial long-distance service by Sept. 22 and worked with local telephone companies in the U.S. and British Virgin Islands to set up calling centers to provide free 10-minute calls for residents.

For more information on AT&T's RSNC service, contact your account representative. ∎

A devastated street in Charlotte Amalie, St. Thomas in the U.S. Virgin Islands shortly after Hurricane Marilyn struck.

AT&T provides sponsorship, ser

GIORGIO MAIOZZI

vices and PrePaid phone cards

WHILE MOST OF US ENJOYED LATE SUMMER VACATIONS AND Labor Day celebrations, more than 300 U.S. military athletes and coaches participated in the First Military World Games in Rome, Italy. When they returned to their bases in mid-September, six gold, seven silver and eight bronze medals — along with a lifetime of memories — came with them.

Hosted by the Belgian-based Conseil International du Sport Militaire (International Council of Military Sports or CISM), the event is the world's largest sports competition prior to the 1996 Summer Olympics.

AT&T is a major partner with United Service Organizations (USO) and supports hundreds of events on military bases throughout the world. "We like to say that we serve the people who serve the people," said Harry Carr, AT&T vice president, Defense Markets.

"So when the Armed Forces Sports Council called us to be the title sponsor of the U.S. team in the Military World Games, we quickly said 'yes'," said Carr.

AT&T contributed $250,000 to support the military games. "If we can help pursue peace and advance international cooperation and understanding of all cultures through healthy competition, we believe it's our duty and our honor to do so," Carr said.

During the games, AT&T operated international calling centers in Rome, providing telephone services to all 7,000 participants and the general public. Through USADirect® Service and AT&T World Connect® Service, callers could access the United States and more than 195 countries.

"Athletes were able to call relatives and friends and tell them about their experiences," said Katia Crupi, Italy marketing manager for AT&T. AT&T also set up dedicated phones at remote accommodation sites for people attending the CISM competitions held outside Rome. ∎
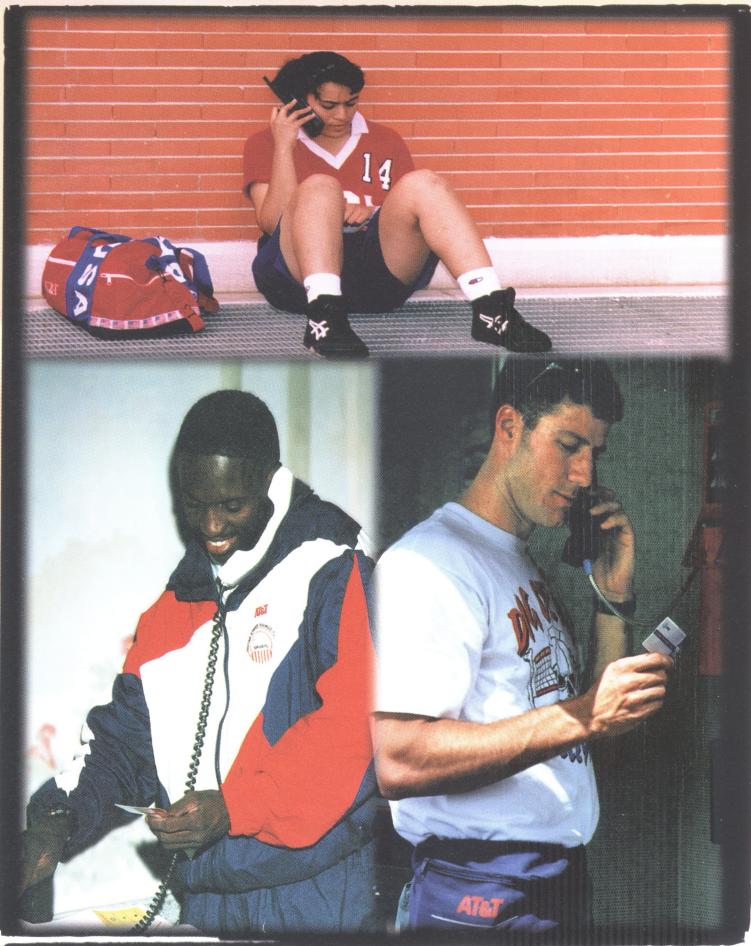
REGINA ESPOSITO

For the U.S. team, paying for AT&T phone calls couldn't have been easier. Athletes received a $60 debit card, known as the AT&T Global Prepaid Card™, which offers prepaid service, competitive calling card rates and access to English-speaking operators.

Utilizing AT&TDirect® Service, team leaders, coaches and officials affiliated with the U.S. Sports Committee, as well as U.S. delegates and AT&T event workers and executives, were given access to cellular phones secured through a local cellular company in Rome. Ellen Mahaffey, AT&T marketing manager, Defense Markets, said that 52 cellular phones were in use throughout the event.

Conseil International du Sports Milit
Fostering Friend

GIORGIO MAIOZZI

aire:
ship Through Sport

The Beginning

IT SOUNDED LIKE A GOOD IDEA: LET'S BRING OUR MILITARY athletes together in the arena of friendly competition, not as warring adversaries but as global peacemakers under the banner of sport. The idea first popped up in the heads of Gen. John "Black Jack" Pershing and Gen. Mac Narney after World War I. And it didn't stop there.

Inspired by their concept, two French military officers, Commandant Henry Debrus and Capt. Edmond Petit, and a Belgian, Lt. Raoul Mollet, reignited the dream just after World War II. To them, it was a good idea since military life already was based on excellent physical conditioning, and military and civilian athletic performances were highly comparable. Thus, in 1948, the Conseil International du Sports Militaire (International Council of Military Sports or CISM) was born.

Membership

France, Belgium, Denmark, Luxembourg and the Netherlands were CISM charter members and by 1951 more than 20 countries had joined. Today, the organization, based in Belgium, boasts 108 member nations. CISM's motto, "Friendship Through Sport," sets the stage for a spirit of fellowship among the military athletes of the world.

The Competitions

Since its founding, CISM has sponsored armed forces championships in more than 20 sports at various times and locations throughout the world. But this year, 50 years after the idea was rekindled, 5,000 military athletes and 2,000 officials, coaches and administrators from more than 100 nations gathered in Rome, the city of peace, to compete for the first time in one location.

"Sport, the only universal language, is a ground of comparison and emulation, but it can also offer good chances to better know and appreciate each other," said Dr. Mario Pescante, president of the Italian National Olympic Committee. "I am sure besides pure competitive results and victories, the Military World Games will respect this principle and turn into a show of unity in cooperation and understanding that people all over the world must have while the third mellenium is looming on the horizon."

Athletes who compete in CISM events have reached the highest level of military sports competition possible and, in fact, as they prepared to compete for 1,195 medals in 17 sports at the First Military World Games, many hoped to go on to the Olympics.

CISM athletes won 30 silver and 42 bronze medals at the 1992 Summer Olympics; at the Winter Olympics in 1994, they took 22 gold, 17 silver and 16 bronze.

U.S. Athletes in Rome

During CISM's First Military World Games, held Sept. 6-15, U.S. athletes from the Army, Navy, Marines and Air Force, as well as the National Guard and Reserves, competed in 14 of the 17 CISM sports. CISM athletes from the United States brought home six gold, seven silver and eight bronze medals in seven sports — Shooting, Navy Pentathlon, Wrestling, Lifesaving, Track & Field, Basketball, and Boxing (see page 9). ■
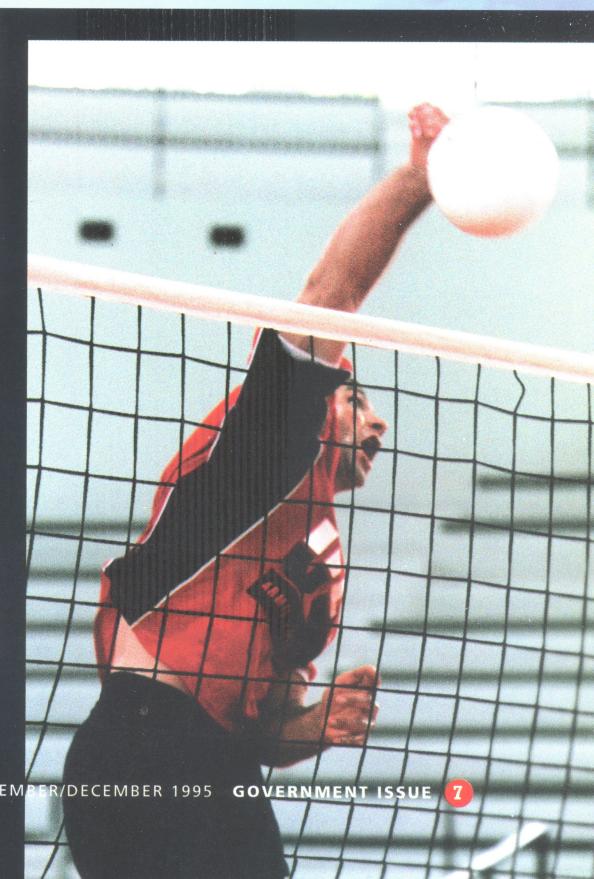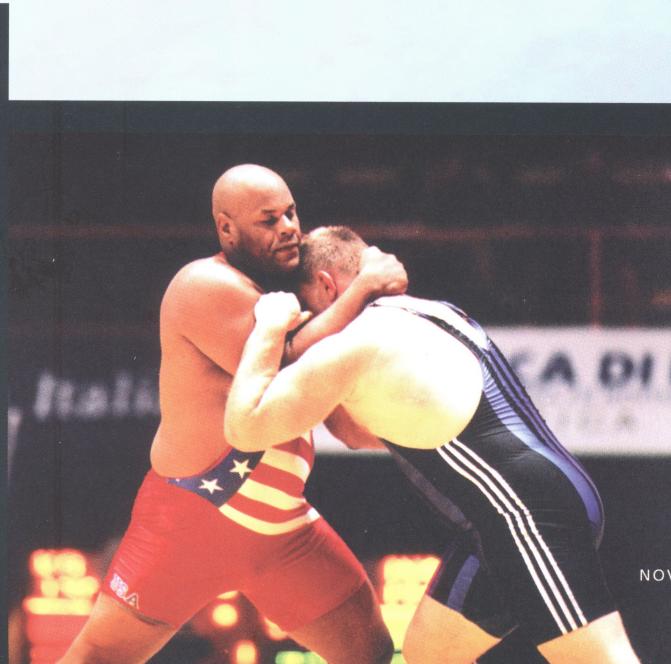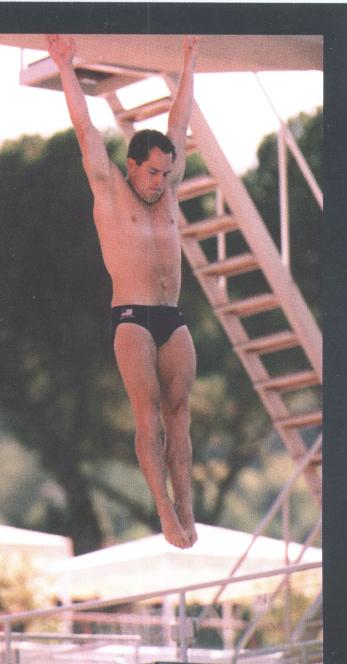
U.S. Military

Russians Overwhelm CISM
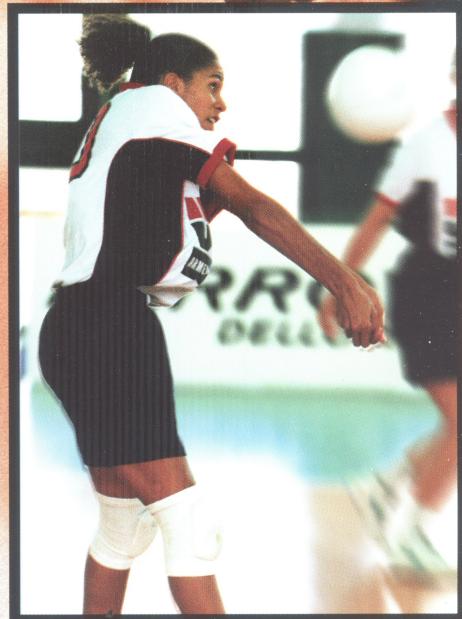
REGINA ESPOSITO

Athletes Bring Home 21 Medals

Games With 123 Wins, United States Finishes 8th Out of 83 Countries

RUSSIA DOMINATED THE FIRST MILITARY WORLD GAMES IN Rome, Sept. 6-15, by walking away with 127 medals, including 62 gold. Its closest competitor, host team Italy, captured 51 medals.

Finishing eighth, U.S. military athletes captured 21 medals. They swept the Shooting event with three gold, two silver and two bronze medals. The United States also excelled in Navy Pentathlon, Parachuting, Boxing, Wrestling, Basketball, Lifesaving and Track and Field. Here are highlights of some of the U.S. performances.

Shooting Airman 1st Class Deena Wigger brought home the first U.S. gold medal by winning the women's 50-meter prone rifle competition. She beat Korea on a tie-breaker, scoring 592 out of a possible 600. Shooting sport pistol, the women's pistol team finished 10th.

In the men's events, Army Maj. Stephen Goff and Army Capt. Matthew Suggs advanced to the finals, where Goff went on to capture the gold in the 300-meter standard rifle individual championship. Suggs placed fifth. The U.S. men's rifle team took the gold in the 300-meter military rapid fire rifle and the bronze in the 300-meter standard rifle competitions.

Goff also won the World Military Rifle title and took the bronze in the 300-meter standard rifle individual match, with Army Capt. Glenn Dubis taking the silver in a tie-breaker with Sweden.

GOLD AIRMAN 1ST CLASS DEENA WIGGER: 50-METER PRONE RIFLE INDIVIDUAL **ARMY MAJ. STEPHEN GOFF:** 300-METER STANDARD RIFLE INDIVIDUAL **U.S. RIFLE TEAM:** 300-METER MILITARY RAPID FIRE RIFLE **U.S. NAVY SEAL TEAM 1:** NAVY PENTATHLON **ARMY STAFF SGT. CHERYL STEARNS:** PARACHUTING-OVERALL **ARMY SPEC. DIONICIO NAPIER:** 200-METER TRACK

Pistol shooter Army Cdt. Ed Suarez, a member of the University of Minnesota Reserve Officers' Training Corps (ROTC), scored 587 out of 600, coming within 2 points of the current CISM record and taking the silver from Austria.

Maj. Richard Hawkins, captain of the U.S. shooting team, whose members won a total of seven medals, including the three gold, is not new to CISM tournaments. He said U.S. teams won all events in China in 1982, all men's events in Switzerland in 1984 and two silver medals in Norway in 1993.

Navy Pentathlon The U.S. team jumped from seventh to first place on the first day of competition with Petty Officer 2nd Class Bernd Hafferkamp, SEAL Team 1, Coronado, Calif., taking first place in the Individual Lifesaving 75-meter swim in 60 seconds.

But it was the total score of Hafferkamp and his teammates, Ens. John Sanchez, U.S. Naval Academy, and Petty Officer 1st Class Andrew Hoyer, Explosive Ordnance Disposal Team, Coronado, which brought the surprise comeback.
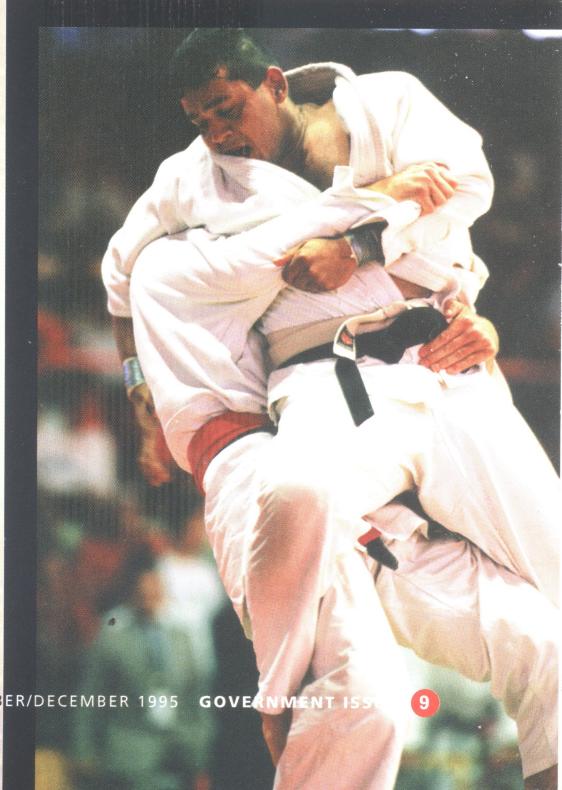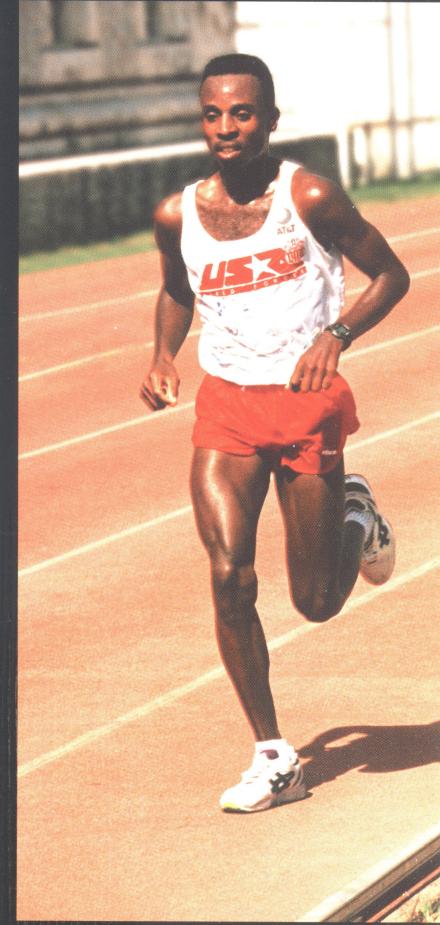
On the second day, with a delayed start and worsening weather, the team dropped from first to third place. Tensions mounted going into the last event with the United States leading, but only by 30 points.

"At that point, five countries were jockeying for first place," said Navy HT1 Dan Cabel from SEAL Team 1, who coached the team. "It was so close that any one of the five could have won. We prevailed."

The United States won in overall performance by 40 points, capturing its first team gold medal since 1988. The silver went to Norway and Sweden took the bronze.

Parachuting Sgt. 1st Class Mark Jones got off to a great start with a perfect score in the accuracy round, but it was Army Staff Sgt. Cheryl Stearns, a reservist with U.S. Special Operations Command and two-time women's world champion, who took the gold in combined style and accuracy parachuting and the bronze in individual accuracy.

Stearns, a commercial airline pilot, holds 29 world records, and at one time, she held four different world records simultaneously. She is the current and 17-time U.S. women's champion. Currently, she holds both the World Championship and the World Military Championship titles and the women's Guinness World Record for 255 parachute jumps in a 24-hour period and most total jumps by a woman — 10,222 so far!

Stearns, who has competed in both men's and women's competitions for 23 years, said, "The key to winning is consistency. It's hard to get to the top, but the big challenge is staying there."

Track and Field Under the hot sun and high humidity, Air Force Capt. Callie Malloy, a behavioral

scientist in San Antonio, Texas, took a bronze medal, finishing third in the women's marathon with a time of 2:53:36. The gold and silver medals went to North Korea.

Air Force Capt. Mark Cucuzzella, a physician at Lajes Field in the Azores, outdid his own best time by more than four minutes, finishing 10th at 2:24:57 in the men's race. Italy won the gold, the silver medal went to France and the bronze to Poland.

and the silver in the 400-meter.

Army Specs. Rhonda Colvin, ROTC at the University of California at Berkeley who advanced to the 400-meter finals, and Simone Brooks qualified for the 100-meter women's finals. Colvin missed the bronze by one-hundredth of a second; Brooks finished fifth.

In men's shot put, the Ukraine set the CISM record with 19.85 meters. Army Spec. Martin Perkins finished 11th with 15.94 meters. In the 4x100 and 4x400 relays, Italy and Kenya, respectively, overturned the CISM records set by the United States in 1987.

Wrestling The first silver medals for the United States came in Greco-Roman wrestling, where Chief Petty Officer 3rd Class

Robert Demeritt, Pensacola, Fla., and Army Spec. Rodney Smith, a 1992 Olympic bronze medalist from Fort Benning, Ga., took second place. Both defeated Russians.

"I went to Rome with the sole purpose of competing and I thought the games were top notch," Smith said. "There, with 30 or so teams to compete against, we were in a whole different league, so getting a medal felt really good."

Sgt. 1st Class Tony Thomas, who coached the team, said this year's competition saw many more countries participating in the games. "The former Soviet Union countries, who had not competed until recently," he noted, "were among our greatest competitors. For some of us, it was a culture shock. We're saying 'Look what we're going to face in Atlanta.'"

Basketball In its first game, the United States scored a 100-86 victory over South Korea, with Petty Officer John Jackson of the Naval Amphibious Base in California leading his team with 34 points. Army Spec. Eric McLaughlin of Fort Sill, Okla., scored 32 points and Marine Corps Staff Sgt. Ronnie Gipson of Camp Lejeune, N.C., scored 19.

But in the second round, after a 14-point lead in the first half, the team lost to Russia 100-91. Citing the opposing team's remarkable height, Assistant Coach

SILVER ARMY CAPT. GLENN DUBIS: 300-METER MILITARY RAPID FIRE RIFLE INDIVIDUAL NAVY PETTY OFFICER 3RD CLASS ROBERT DEMERITT: 114.5 LBS. GRECO-ROMAN WRESTLING ARMY SPEC. RODNEY SMITH: 149.5 LBS. GRECO-ROMAN WRESTLING ARMY SGT. EDUARDO SUAREZ: 25-METER MILITARY RAPID FIRE PISTOL ARMY 2ND LT. CARY BERTA: 100-METER LIFESAVING ARMY SPEC. DIONICIO NAPIER: 400-METER TRACK & FIELD U.S. MEN'S BASKETBALL TEAM: BASKETBALL

Clocking the fastest time in the men's 200-meter preliminaries, Army track star Spec. Dionicio Napier hit the finish line in 20.63 seconds, just short of the CISM record. At the conclusion of the stunning event, Napier had won the gold medal in the 200-meter competition

Ron Foster, athletic director at Fort Hood, Texas, said, "Our tallest player is 6 feet 7 inches; they start two players at 6 feet 10 inches and 6 feet 11 inches."

The U.S. team, which had played together only three weeks prior to the games, went on to beat Canada 141-66.

As they met the defending CISM champs from Italy, McLaughlin and Gipson shot a pair of three-pointers in the final 19 seconds to lead the United States to a win, 80-77. The team won 81-78 over the Ukraine, and then beat China 134-107 as they went into the gold medal round to meet Russia. McLaughlin scored a tournament-high 41 points in the game against China, with Jackson racking up 29.

In the final game, Russia captured the gold 133-72. The U.S. high scorer was Staff Sgt. Vincent Williams of Kitzingen, Germany.

The United States came home with the silver medal, and McLaughlin and Jackson were picked for the all-CISM World Military Games tournament team. McLaughlin garnered CISM MVP honors for the fourth consecutive year.

Boxing Staff Sgt. Harry Washington, an Army maintenance noncommissioned officer stationed at Camp Nimble, Korea, took the first victory for the U.S. Armed Forces in a 13-5 win in the 139-pound weight class. With the score tied 5-5 after two rounds, U.S. Olympic coach-designee Sgt. 1st Class Jesse Ravelo encouraged Washington to "stay inside and work."

Taking his advice, Washington stunned his opponent from Thailand in the third round with an overhand right for an eight count, paving the way to the final score. Washington and Sgt. Jeffrey Clark, Fort Bragg, N.C., went on to the finals, both taking home bronze medals.

Swimming Three medals came back to the United States in swimming, an event in which all medals were won by women. In the 100-meter lifesaving event, Army 2nd Lt. Cary Berta of Fort Hood, Texas, the U.S. premier backstroker, took home the silver medal. Air Force 2nd Lt. Keri Schreiber of Randolph Air Force Base, Texas, won the bronze. The

gold went to Belgium.

In the 50-meter lifesaving, Air Force 2nd Lt. Brenda Clark, finishing in 52.62 seconds, won the bronze.

Russians dominated the swimming events with three gold medals and set three records in seven events. Romania and Poland won two events each.

The men's 4x200-meter freestyle team finished seventh with Army Capt. Mark Matheson, team leader from Temple University, having the best finish. In the 400-meter freestyle, Matheson

was the best individual male finisher, only two seconds off the U.S. Olympic trial time.

Lt. Col. Kelly Kemp, team captain, said Berta trained very hard for this competition and "only lost the gold by about a second. It was really close."

Kemp thought the format of the First Military World Games in Rome was "a great idea. I think it will be a really good recruiting tool that will allow the service academies to bring in athletes who, when they graduate, can get into international competition," he said. "It will bridge the gap between intercollegiate and world championships and the Olympics."

Volleyball Both the men's and women's teams dropped straight set games against the Chinese

and Russians, respectively. The women lost to tall Russians, 15-2, 15-2, 15-2; the men 15-6, 15-13, 15-5. How tall were they? Two of the Russian starters were 6 feet 8 inches tall. And the shortest Russian woman player, at 6 feet 3 inches tall, matched the U.S. team's tallest player's height.

But the women rebounded against the Netherlands 3-0, only to be soundly defeated in the third round 3-0 by the North Koreans. Down by two matches, the team had a chance at third place when they played the winner of the Russia-China match, but lost.

The men, however, despite a strong first game, lost to Belgium 0-3.

Modern Pentathlon U.S. Army Capt. Paul Messenger and Spec. Scott Christie, both stationed at Fort Sam Houston, Texas, finished with total scores of 5167 and 5151 in tenth and eighth places, respectively, in the opening games of the event.

In subsequent individual competitions, however, Messenger and Christie drew uncooperative horses, lowering their overall scores.

In the team relay, Messenger, Christie and Army 1st Lt. James Gregory placed fifth.

Triathlon Both the men's and the women's teams placed fifth at the end of the event with Navy Lt. J.G. Kirk Johnson, the men's top finisher, in 20th place, and in the women's division, Lt. Hope Hall in ninth.

Cycling Facing stiff competition from European athletes, Army Pfc. Jeff Evanshine and Air Force Capt. Joe Arnone placed 11th and 13th, respectively, in the road race. The top three finishers were from France, Italy and Germany, traditionally strong cyclists. ∎

BRONZE U.S. RIFLE TEAM: 300-METER STANDARD RIFLE TEAM   AIR FORCE 1ST LT. CALLIE MALLOY: MARATHON-TRACK & FIELD   ARMY STAFF SGT. HARRY WASHINGTON: LT. WELTERWEIGHT (139 LBS.)-BOXING   ARMY SGT. JEFFREY CLARK: LT. MIDDLEWEIGHT (156 LBS.)-BOXING   ARMY MAJ. STEPHEN GOFF: 300-METER MILITARY RAPID FIRE RIFLE INDIVIDUAL   AIR FORCE 2ND LT. BRENDA CLARK: 50-METER LIFESAVING   AIR FORCE 2ND LT. KERI SCHREIBER: 100-METER LIFESAVING   ARMY STAFF SGT. CHERYL STEARNS: ACCURACY-PARACHUTING

GIORGIO MAIOZZI

The InfoWorx Advantage

Navy Finds Enhanced 800 Service Improves Productivity, Cuts Costs and Increases Service

AT&T'S FTS2000 ENHANCED ANnouncements II (also known as InfoWorx®) applications seem to be growing as fast as a 9-year-old's Christmas list. One of the many services offered on FTS2000, AT&T InfoWorx is the automated, interactive, voice response service that allows around-the-clock information access through an 800 number. Since its inception last year, InfoWorx has attracted government customers from civilian and military markets alike, including the Bureau of Naval Personnel.

AT&T's 800 Service has always provided quick and convenient solutions to a variety of customers' needs, but now a new InfoWorx application allows the Navy's enlisted and officer members access to individual personnel information. By calling 1 800 NAVY 789, data pertaining to a host of personnel categories is at their fingertips.

Judith Hurst, head of the Bureau of Naval Personnel's Communications and Information Retrieval for Distribution, said that in many cases, InfoWorx eliminates the need to speak to a live operator. That improves productivity, reduces communications expenses, and improves service to the Navy community. In this case, the live operators are the Bureau's detailers, who cut orders and assign military members to their duty stations.

In the past, much of their time was spent answering questions that are now addressed through the database. "Now," Hurst said, "detailers can spend productive time speaking with those individuals who need to negotiate orders." With approximately 600 detailers working with 453,000 active duty Navy service members, time is critical.

According to AT&T Account Executive Susie Maxwell, Navy Account Team, "The Bureau's 800 number allows callers two options. By choosing the InfoWorx prompt #1, you can retrieve your own personnel information; prompt #2 gives you the option to connect to your detailer." Callers can gain access by answering a series of questions which ensure that personnel files remain confidential.

This service is available to all enlisted and officer members who are:
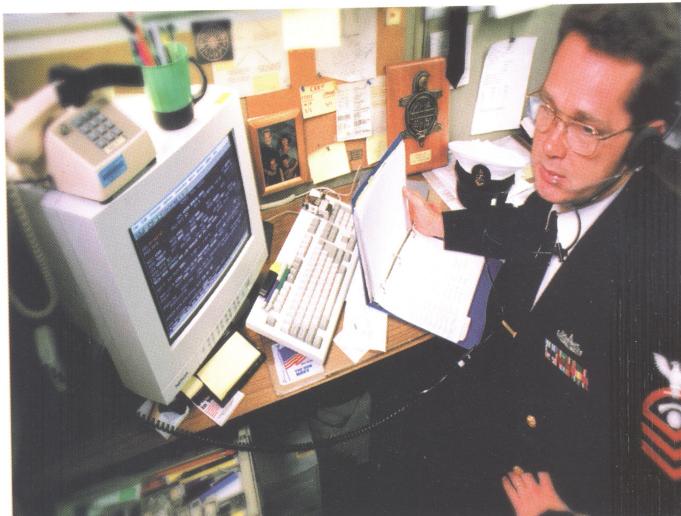
AT&T InfoWorx frees up time for Navy detailer.

RICHARD FRASIER

■ under orders, and/or are awaiting confirmation on orders,
■ awaiting confirmation on retirement,
■ awaiting acceptance into an entitlement program,
■ eligible for a promotion or selection board.

Callers can access information concerning:
■ Advancement results,
■ Order and personnel requests,
■ Retention and fleet reserve (retirement) information.

Because the questions callers ask relate to specific information about themselves, the InfoWorx application can query the Bureau's database and provide information back to the caller via digitized speech. This is referred to as Level-Four InfoWorx – Remote Host Access. This is the most complex level of InfoWorx," Maxwell said. "Although it is used by many customers in AT&T's commercial markets, the Navy is its first government customer."

"Remote Host Access is a private-line connection between two sites," said AT&T's Andrew Adamson, Technical Sales Specialist. "In this case, the call connects with the InfoWorx National Center (INC) in New York. The equipment then links to the Navy Annex in Arlington, Va., where it queries the database for information, sends it back to the INC, where it is translated into speech, and then speaks it back to the caller — all in a matter of seconds."

"AT&T maintains everything in the network," he said. "This saved the Bureau thousands of dollars by eliminating the need to invest the money to purchase and maintain its own equipment."

Are Navy personnel using it? Absolutely! According to Maxwell, "We can tell by call volume that it's definitely taken off. People are happy now that they don't have to be put on hold to get information that's available at their fingertips."

Hurst noted that line utilization into the database averages 94 percent. "Not only does it free up our detailers to attend to other business, it permits us to save significant financial resources that would normally be spent on accepting collect calls world wide," she said.

For more information about AT&T's FTS2000 InfoWorx, call Julie Cartwright at 301 608-4936 or your AT&T account representative. ■

Copper Wire

Copper phone lines can deliver the Information Age now

UNTIL RECENTLY, MANY TELECOMmunications companies and their customers believed the plain old copper telephone line was too slow to handle the massive amounts of information that make up highspeed, interactive multimedia services. They thought the delivery of high-quality services that combine two-way voice, data and video content would have to wait for the widespread installation of broadband information highways — networks of fiber-optic lines or hybrid fiber/ coaxial cable systems.

However, the copper telephone line in fact is ready to play a crucial role in delivering such high-quality services. AT&T Paradyne has developed two "modern modem" technologies that take advantage of the millions of miles of copper wire already installed throughout the nation to offer affordable interactive multimedia services now, rather than later.

GlobeSpan™ ADSL

In July, AT&T Paradyne unveiled its GlobeSpan ADSL (Asynchronous Digital Subscriber Line) technology platform. GlobeSpan ADSL allows telephone companies to offer high-quality video services with one-way "live" broadcast reception capabilities over existing copper telephone lines. Thus customers can transmit data and/or video signals while simultaneously using the same copper phone line for a voice conversation — without interrupting the data or video transmission.

GlobeSpan ADSL, with its fast transmission speeds, also enables telephone companies to provide government, business and residential customers with easy, affordable access to the Internet.

Despite the continuing emphasis on fiber and fiber/coax systems, ADSL is proving to be one of the most significant trends within the telecommunications industry and for society at large.
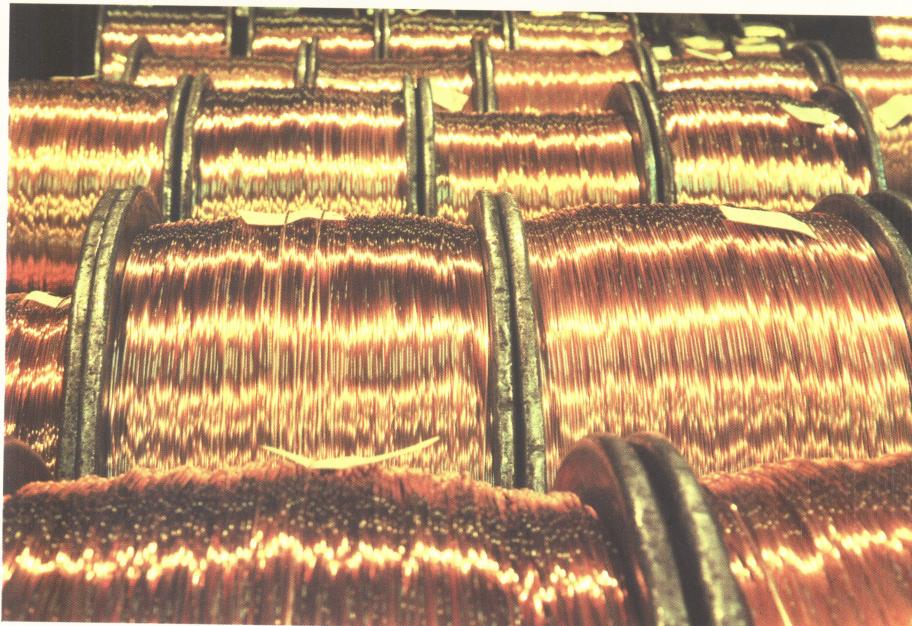
INDEX STOCK PHOTOGRAPHY

The expense of installing fiber-optic or hybrid fiber/coax lines means that telephone companies can afford to install these broadband systems, at least initially, only in densely populated, high-income areas.

However, ADSL, together with compression technology that can squeeze more information onto telephone lines and server technology that stores massive amounts of video information, promises to accelerate universal access to advanced multimedia services. Anyone with a copper telephone line will be able to gain access to video and other information libraries and receive movies on demand, as well as live broadcast events.

GlobeSpan SDSL

Only two months after announcing the GlobeSpan ADSL technology, AT&T Paradyne introduced the next logical step in the technology's evolution, the GlobeSpan SDSL (Synchronous Digital Subscriber Line) solution. GlobeSpan SDSL allows copper telephone lines to support high-quality, two-way full-motion interactive videoconference calls.

"This technology will allow worldwide phone companies to make the information superhighway as universally accessible as today's telephone, radio and TV services," said Clete Gardenhour, AT&T Paradyne's director of Business Development.

Practical Uses for GlobeSpan Technology

In addition to Internet access, telephone companies can use GlobeSpan technology to offer government agencies and other customers opportunities to reduce the time and travel costs associated with meetings, training sessions and other communications-intensive activities. The capabilities of GlobeSpan ADSL are ideal for such applications as telecommuting, distance learning and remote local area network access.

For more information on ADSL and SDSL platforms, contact your AT&T account representative. ■

What Goes Around...

"AT&T'S TEACHERS & Technology Institute put a new 'spark' in my desire to teach," said participant Dean Mehrer, teacher at Bismarck High School, North Dakota.

Begun in 1993, the institute fosters interaction between AT&T and educators. Among the program's several goals:
- to recognize outstanding math and science teachers in grades 7-12,
- to establish a closer relationship with educators and local government,
- to provide educators with the expertise needed to use advanced technology in their classrooms.

More than 300 teachers applied for the 1995 program. AT&T Public Relations Manager Carlos Santos said the 52 finalists from 26 states were selected on the basis of their strong commitment to their profession. Applicants had demonstrated innovative teaching techniques, such as using advanced on-line skills to bring information to their respective disciplines. They exhibited a willingness to apply AT&T technology in their classrooms and also to continue to share information with colleagues after the program ended.

At the Institute
From July 16-29, the teachers participated in an intensive program exposing them to the complexities of AT&T technology and research. Using AT&T software, they became familiar with e-mail, a process which enables users to send and receive instant messages electronically.

The teachers had hands-on practice with computers and Internet web browsing, where they drew up a menu and "browsed" through titles until they found desired topics.

They saw how the AT&T Learning Network, a curriculum-based program, can electronically link classrooms around the country.

On the second day, the entire group listened to Linda Roberts, special advisor to the U.S. Department of Education. Via AT&T's videoconferencing service, Roberts spoke of future trends in education and concerns about government practices. Visits to AT&T Bell Laboratories provided teachers with new insight into computerized programs and technology. At the AT&T Microelectronics plant in Allentown, Pa., they saw how silicon crystals are made for computer chips.

At the Labs, teachers not only observed but also worked with outstanding mathematicians and engineers, such as Nobel Laureate Arno Penzias and Ron Camarda. In one situation, a group watched as a scientist dropped a computer and the teachers recorded the kinds of damage that occurred.

Mathematics teacher Lynne Blair observed scientist Valerie Kuch work on the process of testing and developing plastic for LCD screens. "I also gained an understanding of how optic fibers are developed, put into cables and spliced together," Blair said.

A second visit to the Labs paired Rhode Island teacher Patricia Lytle with a physicist who demonstrated super/semi/and nonconductivity. Lytle watched as the physicist created magnetic fields by lowering temperature.

Learning Circles
Although on-site visits provided the teachers with first-hand observations about AT&T technology, another goal of the institute focused on their developing a project that incorporates technology back in their classrooms. Groups of eight teachers from diverse locations and teaching disciplines formed "learning circles."

Before developing a project, the teachers received training in group dynamics from two AT&T presenters. Members completed a personality survey revealing how they usually react in group situations. They practiced strategies that would enable them to contribute to the group's efforts, rather than set them apart.

By Wednesday of the first week, learning circles met to decide on a group name and a project focus. Blair's group called itself the "Green Team."

Deciding on a project focus wasn't easy. Members had to mutually agree on an "umbrella" project, one in which everyone could contribute data from experiments

COURTESY OF AT&T

Lynne Blair, right, a math teacher from Vermont, and Catherine Holmes, center, a science teacher from Ohio, met with Bell Labs scientist Valerie Kuch to learn more about optical fiber coatings.

carried on back in their classrooms. This proved difficult. Science teachers tend toward what is observable, i.e. taking temperatures or noting environmental changes. Mathematicians like to compile figures and do statistical analysis. A common starting point had to be established.

Although AT&T provided a guide, teachers had the flexibility to create experiments that met students' needs, encompassed their schools' curriculums, and fulfilled the circle's goals within a 15-week timeline.

On the last day of the Institute, each circle presented its project. The Green Team reported their focus was "patterns." They were ready to put their new knowledge about technology into operation.

Back in the Classroom

Back home, Blair's students devised a survey of what they wanted to learn about the other eight locations in their circle. Sample questions included: What is the population of your school and town? Do the people hunt, fish, swim, go horseback riding?

The students will tabulate answers on a spreadsheet and determine the mean, median and mode. As each class in the circle sends back data, Blair's students will chart the information and use statistical analysis to note patterns from school to school.

Montana teacher Andrea Holmen's class is also part of the Green Team. Her students will focus on temperature and environmental patterns. Readings are taken three times a day at 8:30 a.m., 11:30 a.m. and 3:30 p.m. The students note patterns in locations ranging from Texas to New York.

Each class collects and analyzes its own data. Questions and information are shared within the circle through e-mail on the AT&T Learning Network, which is provided to each school free of charge by AT&T for one semester.

AT&T Support

As teachers and students work on their projects, AT&T provides them with a support structure. A mentor teacher who attended the previous year's institute is assigned to each circle. The Green Team's mentor is in Honolulu. Through e-mail, the mentor keeps in touch with each class, offering advice and encouragement, and checks on the progress the students make.

AT&T Program Director Joan Fenwick correlates the many facets of the institute and answers teachers' questions.

When a teacher wants to give a presentation about the project or the technology, Assistant Director Penny Wintermute compiles information and offers technical assistance.

...Comes Around

"Learning Circles" help AT&T's Teachers and Technology Institute bring advanced technology to educators

Rafael Davin, right, a science teacher from Nevada, works with Maryland math teacher Tedd Gott on a team building exercise.

Outcomes

Teachers report their students are motivated and challenged. They become more comfortable using e-mail and the information superhighway. "Not all students have an opportunity to have hands-on experience with this kind of technology," Iowa teacher Judy Kleve said. "They are very excited about accessing information. It has sharpened their predicting and analyzing skills, as well."

The information superhighway brings the outside world into the classroom. "It has opened up new horizons for some of my students who would never leave the community," Blair said.

Teachers in the program see their projects as an avenue toward developing an awareness of technology in their communities. They feel it is important for the public to gain an understanding not only of how technology is used in the classroom today, but also what the implications are for the future.

"If we can keep the importance of working together in mind, then technology works for us rather than against society," Holmen said.

In 1994, the Conference Board, an organization of businesspeople throughout the world, gave the "Best in Class" award to the AT&T Teachers & Technology Institute for AT&T's accomplishments in education.

"It is the mutual commitment between AT&T and education that makes the institute such a success," Santos said.

For more information on the AT&T Teachers & Technology Institute contact Penny Wintermute at 908 221-7662. ■

SURF'S UP!

AT&T can help you conduct business on the Net

WHAT DID YOU DO THIS WEEK? GO TO THE BANK OR THE MALL OR THE LIBRARY? Apply for a mortgage or a credit card? Sign up for life insurance or a frequent flyer club or obedience school for your dog?

Now imagine that without becoming a computer nerd, you could easily and quickly perform any of these tasks electronically — at any time of the day or night — without ever leaving your home or office. In fact, imagine that virtually any task requiring you or your agency's constituents to fill out a form, place an order, make a purchase or conduct research can be accomplished securely from a computer in the boardroom or poolside or in your car.

This is just an inkling of the potential for using computers and the Internet — a global maze of computer networks — to reduce some of the hassles in our personal lives and simplify access to business, government, and academic services.

Sound exciting? Although millions of people are growing blurry-eyed "surfing the Net," many more can't be bothered — yet. The technology is just too complicated and the information is too scattered to engage the interest of the mass constituencies that business and government could serve with electronic transactions.

But AT&T has a solution and wants to share it with more than 90 million people. It's a comprehensive plan to make on-line information and services as widely available and easy to use as the telephone.

To do this, AT&T proposes to simplify access to the Internet and help customers figure out what to do once they're there. It will help individuals and organizations develop easy-to-find and user-friendly "store fronts" on the World Wide Web. It will aggregate content into electronic communities of interest to maximize their use and usefulness. And it will continue to develop security procedures so you won't worry about sacrificing your Social Security or credit card number to a hacker.

"We intend to take the Internet from the realm of the cyberspace pioneers to the world of everyday use," said Alex Mandl, executive vice president and chief executive officer of AT&T's Communications Services Group.

Three new domestic businesses will help accomplish this.

Gateway services will provide superior, easy-to-use Internet access with powerful navigational tools and information directories. *AT&T WorldNet*[SM] *Managed Internet Service* is already available; it enables business and government users to access, plan, operate, manage and maintain dedicated leased line connections to the Internet. Technical trials of *AT&T WorldNet dial-up services* have begun, and general availability is expected in early 1996.

AT&T'S INTERNET SAVVY

What does AT&T know about the Internet? Quite a lot, based on 15 years of experience as an Internet developer and user. Among its innovations are:

■ development of the UNIX operating system that allows open standards like the Internet TCP/IP protocol to function.

■ the first implementation of security firewalls, which provide secure gateways between two or more computer networks.

■ development of the InterNIC directory of directories for the Internet, in conjunction with the National Science Foundation.

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A new **hosting and transaction** business will provide business and government with a range of services to help them reach more customers, promote their products and services, publish electronic catalogs and handle secure transactions through the Internet. Ultimately, this will make electronic purchases and other confidential transactions as broadly accepted as toll-free 800 services are today.

A new **content services** business is already working with content owners to provide tailored information and entertainment services to consumers, professionals, government agencies and businesses. One element of this business is AT&T New Media Services, which will work with content providers to create a series of AT&T-branded on-line information services, targeted primarily at business/professional markets. The first branded service is *AT&T Business Network*, a new resource that gives business owners, managers and professionals easy, attractively priced access to business news and information, plus practical, hands-on information and services to gain and sustain a competitive advantage. When it becomes generally available this fall, AT&T Business Network will reside on *AT&T Interchange Online Network*[SM], a next-generation on-line publishing platform that hosts a collection of information services developed by independent publishers.

AT&T is also bringing Internet services to customers in Europe:

AT&T Internet Solutions will provide European business and government customers with the services they need to access and use the Internet in order to serve their customers most effectively. AT&T Internet Solu-tions covers the full spectrum of business needs — from accessing, planning, setting up, operating and maintaining dedicated leased line connections to setting up and managing a World Wide Web site to full support for electronic commerce and publishing.

"AT&T already has the widest range of communications services enabling consumers and businesses to keep in touch with families, clients and information — anytime, anywhere," Mandl said. "Now, we're expanding the vision to open up a new world of on-line services and electronic commerce possibilities."

For more information about AT&T's Internet services, contact your account representative. For information specific to AT&T WorldNet Services, please call 1 800 309-3349. ■

Working With Leaders in the Internet Industry

Rather than reinvent the surfboard, AT&T is working with leading Internet service providers and independent publishers to make its comprehensive Internet strategy a reality. Here are some of them:

AT&T WorldNet[SM] Managed Internet Service is provided in conjunction with **BBN Planet**, a subsidiary of BBN (Bolt, Beranek & Newman, Inc.)

Netscape, a leading provider of browsers and other Internet client/server software, will provide an AT&T-branded browser.

McKinley, Inc., a leader in developing Internet resource directories, will create navigational tools to guide AT&T customers around the Internet.

Harley Hahn, author of the *Internet Yellow Pages Directory*, and publisher **Osborne/ McGraw Hill** will develop exclusive Internet exploration capabilities for AT&T WorldNet Services, offering users guided tours of the Internet organized by themes and special interest areas.

Verity Corp., the leading designer of Internet search and retrieval tools, will offer its technology for powerful full-text search and personalized information agent capabilities within AT&T World Net Services.

Software developer **Adobe Systems, Inc.** will provide its leading-edge Acrobat[1] software for viewing, navigating and printing digital information, Internet text and images.

Novell, Inc. will help ensure that business customers with AT&T NetWare Connect[2] Service will be able to use AT&T World-Net services as a common Internet access vehicle.

Independent publishers **Ziff-Davis, The Washington Post, the Minneapolis/ St. Paul Star Tribune and The Gartner Group** currently offer services hosted on the AT&T Interchange Online Network.

[1] Acrobat is a trademark of Adobe Systems, Inc.
[2] NetWare Connect is a trademark of Novell, Inc., used by AT&T under license from Novell, Inc.

Visit AT&T's Home Page on the World Wide Web

If YOU ARE ALREADY AN INTERNET veteran, AT&T's Home Page on the World Wide Web — located at http://www.att.com — can give you an exciting look at the company's products and services along with a wealth of other interesting features. Here's a sampling of what you'll find:

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AT&T's Home Page on the World Wide Web, as it looked on Oct. 5, 1995.

Feature Area

One of the most popular items on AT&T's Home Page is the feature symbol in the upper right hand corner of the screen. One recent feature showcased AT&T WorldNet^{SM} Services. Web browsers clicking on the symbol could see two sets of pages, one called "A few reasons to choose AT&T for all your Internet services," followed by a link to pages detailing AT&T's World-Net Managed Internet Service for business. If the feature has changed by the time you access AT&T's Home Page, you can still link to information on AT&T WorldNet services from AT&T on the Net, AT&T at Home, and AT&T at Work.

AT&T on the Net

Here is the most popular place on the AT&T site, with links to a variety of places and features, including Global Switched Digital Services, the Consumer Information Center, the Plan 9 web site,

Champions of Cyberspace, Data Communications Services, Bell Laboratories T-Rays, the ImagiNation Network and lots more. You'll also find links to other AT&T web sites, AT&T's "Friends on the Net," the corporate server team pages and the What's New! page.

AT&T at Home

Click here for material on consumer-oriented products and services, telecommuting, and other specialized information such as "What If I'm Home Alone?" that includes safety tips for kids. You can also learn about AT&T's calling plans, the AT&T Universal Card, AT&T EasyLink Services®, a virtual AT&T Phone Center and other consumer offers.

AT&T at Work

Click here for a rundown of business calling services by market segments, telecommuting information and resources, products such as
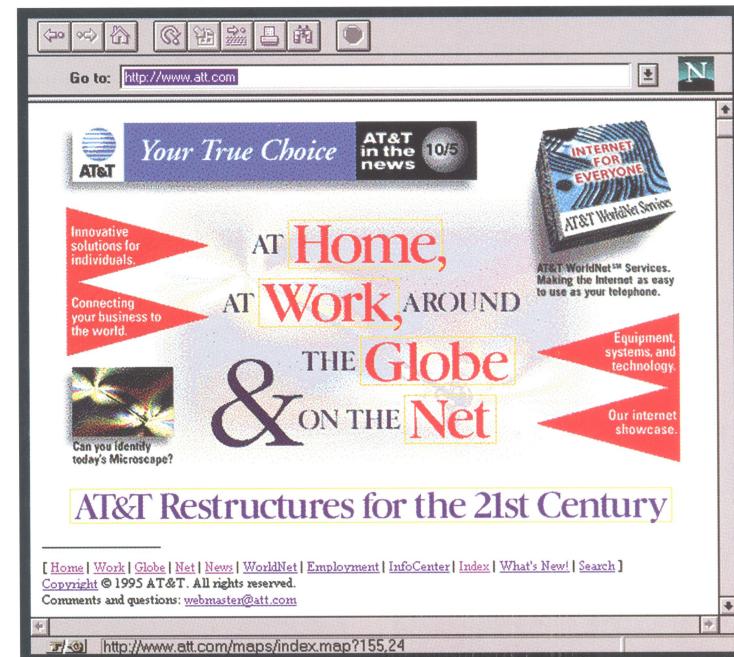
PBXs and telephone equipment, and computing products from AT&T Global Information Solutions. By year-end, AT&T Government Markets will have a special page listing services for government customers.

AT&T Around the Globe

This is the place to find AT&T offerings that support global communications, transmission and switching systems, building cable and wire and other infrastructure offerings. The "Going Global" pages detail AT&T's presence around the world.

AT&T in the News

See an index of AT&T

news releases and, soon, speeches by AT&T executives. From here, you can link to a web site for AT&T Interchange Online Network^{SM}, a next-generation on-line publishing platform that hosts a collection of information services developed by independent publishers.

For a complete list of everything on the site, just click on Information Center. Here you will see links to the site Index, annual reports, Going Global, more Information Resources, the AT&T Foundation, and Education and Community Service areas. ■

Keeping Your Data Under Lock and Key

AT&T security consultants help keep electronic bandits at bay

JUST IMAGINE WHO'S TRYING TO access your agency's computing and communications systems today. Besides authorized users, a host of cyberspace cat burglars may be attempting to pry open electronic locks to reach your information valuables.

The need for effective measures to protect networked systems is a fact of life these days. These measures can be more easily implemented with the help of AT&T Security Consulting and Integration Services, offered by the Secure Systems Engineering Department of AT&T Bell Laboratories.

Over the years, work with a variety of government and commercial customers has resulted in a proven process for analyzing networked system security. "Our methodology is comprehensive and one of the few that complies with Department of Defense (DoD) standards," said AT&T's Ed Amoroso, member of the technical staff. "We try to focus on some simple principles: What is at risk? What are the best protections? What are practical, cost-effective implementation techniques that work?"

Identifying system weaknesses

"The first step is to gather information on the current environment — such as hardware, software, local area networks, system connections and built-in security controls," said AT&T Technical Staff Member Dan Goddard.

Then AT&T works with its customer to identify threats, vulnerabilities and attacks.

Threats are the ways nefarious intruders can wreak havoc by gaining unauthorized access to computing or communications systems. They can compromise confidentiality of information, for example. If they alter information, they can destroy the integrity of data. If they block access to information, they can prevent authorized employees from using the systems.

Vulnerabilities are system weaknesses that give intruders golden opportunities. While these can involve complex technical aspects of computing, networking and information configurations, they can also be the byproduct of simple operational procedures like taping a password near the computer. Vulnerabilities may result from
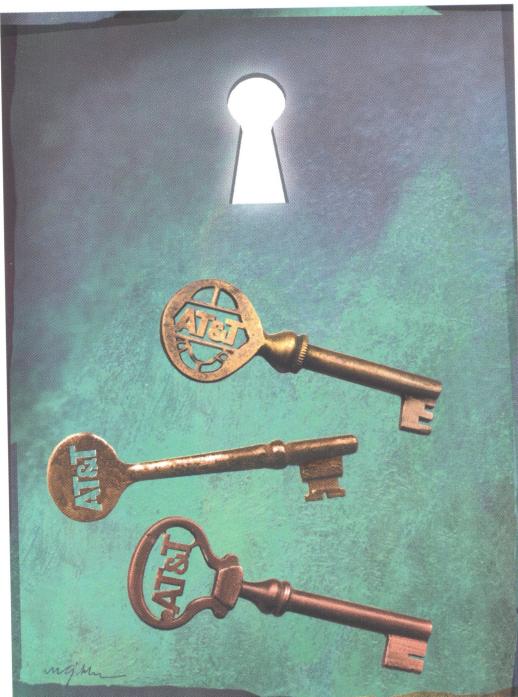
MICHAEL GIBBS

physical problems like unreliable air conditioning and electricity, or from personnel-related situations with unhappy employees.

Attacks are electronic break-ins. AT&T's methodology addresses real instances of attacks as well as the potential for attacks on the system.

Resource-rich analysis

With an understanding of threats, vulnerabilities and attacks, AT&T and the customer work together to assess overall security risks and prioritize problems. Because each customer is different, every analysis is unique; and it's hard to predict ahead of time what issues will need special attention. But the security consulting group comes fully prepared.

"We bring all the resources of AT&T with us," Amoroso said.

That expertise folds into the security analysis to help identify security solutions — safeguards to anticipate future problems as well as countermeasures to respond to existing or suspected problems. Then the AT&T team helps integrate these solutions into the system.

"We help customers tie everything together with a common residual risk, which means that there's the same level of security throughout their system," Goddard said. "So there's not one area that's very secure and one that's not. It's a complete system-wide analysis."

AT&T Security Consulting Services have benefited government and commercial networks around the world, with satisfied customers like the Australian Department of Defence. "The report produced was of an extremely high quality based upon rigorous analysis of the Navy Information Technology environment," wrote Commander S. J. Hart, the Australian Navy's director, information systems. "The overall model and broad strategy have been the cornerstone to assist continuous improvement in addressing the security issues faced in the Navy."

If your agency needs a fresh look at security for your computing and communications systems, you can learn more about the AT&T methodology from two recent articles written by members of AT&T Bell Laboratories' Secure Systems Engineering Department: *An Engineering Approach to Secure System Analysis, Design, and Integration* and *Network Security in a Heterogeneous Environment*. For complimentary copies of these articles or more information about AT&T Security Consulting and Integration Services, contact Susanne Best at 1 800 525-2279. ∎